



Secondary CITIES



New Data Collection Tools: GeoForm

Crowdsource your data
via online forms



Kharkiv Public Safety Survey

Fill out the survey below to report locations in Kharkiv with public safety concerns based on your own personal experience.

1. Enter Information

Type of Public Safety Hazard

What type of public safety hazard have you observed at this location? Please enter one of the following options: Poor Visibility; Crime Threat; Pedestrian Impediment; or, Other.

Description of Hazard

Please briefly describe the type of hazard you are reporting. What is the visibility issue, crime threat, or pedestrian barrier? (e.g. low lighting, vehicles can't see pedestrians, lack of sidewalk, steep ramp) 256 characters remaining

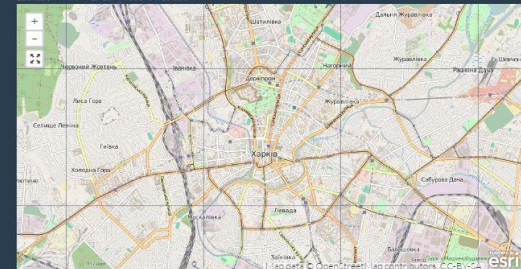
Effect on Your Movement (required)

Rate how much this public safety hazard influences your path through the city on a scale of 1 to 3. 1 = I never alter my route because of this hazard. 2 = I sometimes alter or consider altering my route because of this hazard. 3 = I always alter my route because of this hazard.

2. Select Location

Specify the location for this entry by clicking/tapping the map or by using the following option.

Find address or place



3. Complete Form

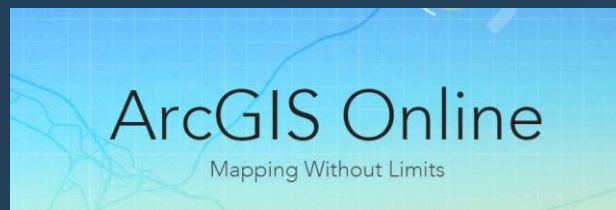
Add this information to the map.





GeoForm: What is it?

A GeoForm is a tool for ArcGIS Online.



It is a configurable template for editing an online data layer through a form.

Users simply enter data online through a form, they do not need to know how to edit a web map or have an account login.





GeoForm: How is it different?



How is a GeoForm different from the other tools we've used?

Think of a GeoForm as a website based version of a Survey123 form, requiring NO login.

Anyone with the web address can access the survey and submit data – this is a data CROWDSOURCING tool!

Form app comparison

Esri has a number of apps you can use to collect data in the field. They all offer a form to fill in and all connect to ArcGIS.

The following table shows a comparison of functionality among Survey123 for ArcGIS, Collector for ArcGIS, and GeoForm.

Functionality	Survey123	Collector	GeoForm
Data collection style	Formcentric	Mapcentric	Formcentric
Supports capture of new data	Yes	Yes	Yes
Supports editing existing data	No	Yes	No
Smart forms	Yes (XLSform)	No	No
Works offline	Yes	Yes	No
Supports anonymous access	No	No	Yes
Platforms	iOS, Android, Windows, Windows Phone, Mac, Linux	iOS, Android, Windows	Web
Technical Support	Esri and the community	Esri and the community	Esri and the community

The following expands on some of the key concepts described in this table.

Formcentric data collection

Survey123 and GeoForm are formcentric data collection apps. The focus is a list of questions—that is, the form. With Survey123 and GeoForm, you can capture geographic information (points), but geo is just another question in the questionnaire, not the focus. That's why they're called form-centric. Collector for ArcGIS is a mapcentric app: it opens maps that you can use to capture information.

Smart forms

Survey123 uses the xForms specification to bring forms to life. Collector for ArcGIS and GeoForm allow you to edit attributes, but the rules you can apply to a form are clear (choice lists and basic question types). Skipping questions, applying expressions to precalculate and validate responses, presenting the form in different languages, capturing signatures, and much more, are some of the unique smart-form features in Survey123.

Anonymous access

Survey123 and Collector use your ArcGIS identity (organizational account) to secure access to your data and provide a tailored experience. GeoForm, on the other hand, can be accessed anonymously. With GeoForm, the form will look the same to everyone and unsecured data can be edited by anyone. Through the use of ArcGIS organizational accounts, both Collector and Survey123 allow you access to only the data you've been granted permissions to edit. Also, because of the use of ArcGIS credentials, the ArcGIS administrator and others with particular permissions can track exactly who is capturing what data.

<https://doc.arcgis.com/en/survey123/desktop/create-surveys/formappcomparison.htm>



GeoForm: Pros & Cons



PROS:

- **Expand data collection**
- **Validate project data with information from the public**
- **Only need a web browser**

CONS:

- **Does not work offline**
- **Does not work well for field data collection**
- **ArcGIS Online account required to set up form**



GeoForm: Examples

Dogs Around the World

<https://diygeoapps2.maps.arcgis.com/apps/GeoForm/index.html?appid=51f5f38f99844ffeab2cfd0feb551a6&>



Dogs Around the World Survey

Please fill out the below form with information on your dog.

If you would like to view the results of this survey, please click [here](#).

Thank you for your participation!

1. Enter Information

Owner's Name (required)

Dog's Name (required)

Dog Breed

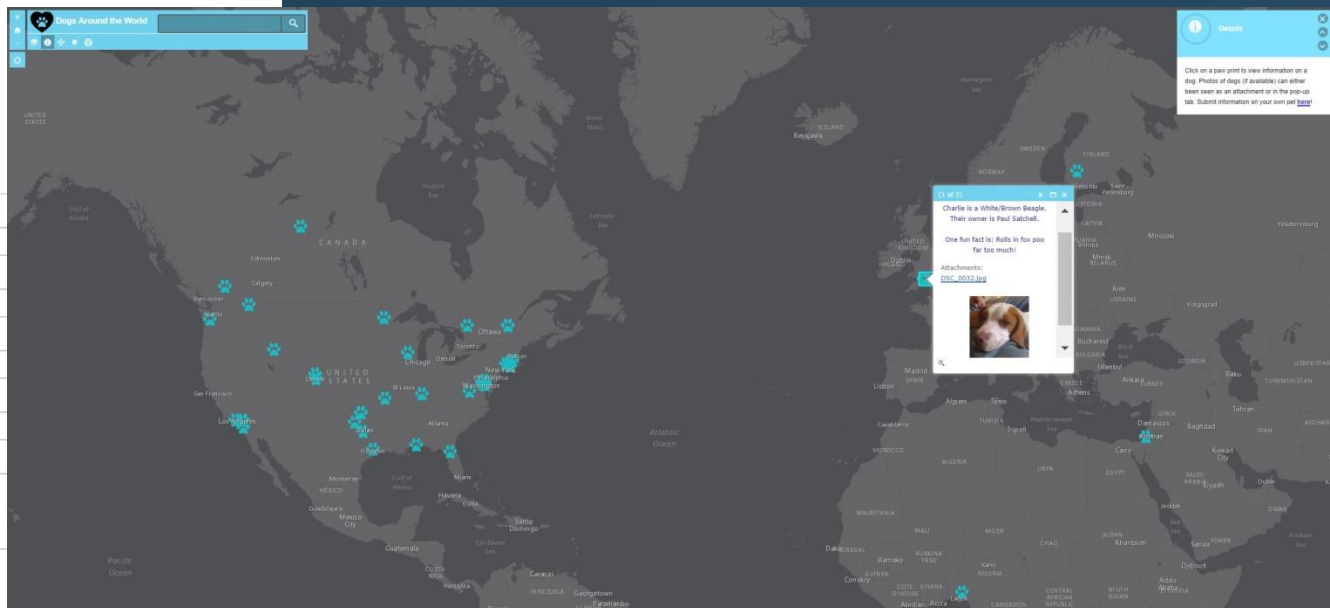
Fur Color

Fun Fact

256 characters remaining

Please attach a photo of your dog!

Select File





GeoForm: Examples

Kharkiv Public Safety Survey

<https://sckharkiv.maps.arcgis.com/apps/GeoForm/index.html?appid=09a612103baf4766aaffa41a8660a65c>



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Effect on Your Movement (required)

Rate how much this public safety hazard influences your path through the city on a scale of 1 to 3. 1 = I never alter my route because of this hazard. 2 = I sometimes alter or consider altering my route because of this hazard. 3 = I always alter my route because of this hazard.

2. Select Location

Specify the location for this entry by clicking/tapping the map or by using the following option.

Find address or place

3. Complete Form

Add this information to the map.



GeoForm: Resources



ArcGIS.com GeoForm Overview:

<https://www.arcgis.com/home/item.html?id=931653256fd24301a84fc77955914a82>

Live Demo – ‘Rate the GeoForm’ Example

<http://esri.github.io/geoform-template-js/>



Build a GeoForm



Three Steps:

- Create a new data layer
- Create a web map with that data layer
- Customize the GeoForm Web App

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Build a GeoForm: Step 1



Create a new data layer

- Create the data layer that will be on your web map and will capture submitted responses
- Create new layer with fields and settings that match the data you will collect
- You can later use this layer in multiple web maps and apps



Build a GeoForm: Step 1

Create a new layer

Log in with your AGOL account to developers.arcgis.com

a) Browse to developers.arcgis.com.



b) At the top of the page, click Sign In and sign in using your ArcGIS Online account



Build a GeoForm: Step 1

Create a new layer

Log in with your AGOL account to developers.arcgis.com

Sign in | ArcGIS for Developers

https://developers.arcgis.com/sign-in/

ArcGIS for Developers Features Documentation Community Plans

Search Sign In

Sign in to ArcGIS for Developers

Sign in with your existing ArcGIS Online account or enterprise login and...

- ✓ Access ArcGIS Online services like geocoding and routing
- ✓ Create services to host geospatial data on the ArcGIS Platform
- ✓ Monitor credit usage and costs of your applications
- ✓ Download SDKs and start building mobile, web, and desktop apps

You can sign in with your existing ArcGIS Online account or enterprise login or sign up for ArcGIS Online with a [free development and testing plan](#) and get started today.

Sign In

esri

Username
username_gaolapps

Password

☐ Keep me signed in

[SIGN IN](#)

[Forgot password?](#) [Forgot username?](#)

OR

Sign in with [ENTERPRISE ACCOUNT](#)

[Need an account? Sign up for free.](#)



Build a GeoForm: Step 1

Create a new layer

Click on the Layers menu, then 'Create New Layer'

c) At the top right of the window, click the Layers button.



d) Click Create New Layer.





Build a GeoForm: Step 1

Create a new layer

Enter the Details of your new layer, including field names and data type

Layers > Create Layer

New Layer Details

Title

required

My Cool Layer

<http://services1.arcgis.com/EAhKCspn04W45w4b/arcgis/rest/services//FeatureServer>

Tags

required

geojson, javascript, analysis

Description

An example of a short description explaining this layer's purpose.

Geometry

points

A layer's title and description can make it easier to understand what a layer is for, and where the data came from, later on. Tags are used to help group multiple layers thematically, and help with discoverability later on.

A layer can only contain a single geometry type. This makes defining complex renderers possible.



Build a GeoForm: Step 1

Create a new layer

Enter the Details of your new layer, including field names and data type

Fields

☐ Required

A layer needs at least one field. Fields define the structure of the data for each feature in the layer. The alias is a human readable key of the field name.

Layer Properties

Layer Properties

☐ Enable the layer to be taken offline to allow it to be viewed, edited, and synchronized.

☐ Allow attached images and other files to individual features.

These options are for more complex use cases. They can be changed later on.



Build a GeoForm: Step 2

Create a web map

Open your new layer in ArcGIS Online, Open in Map Viewer

a) Click Open In ArcGIS Online.

Layer URL:
<https://services6.arcgis.com/zHO2ebR1OMaNTer5/arcgis/rest/services/...>

Buttons:
Share
Open in ArcGIS Online
Open in Map Viewer
View Service

You will be directed to the feature layer's item details page.

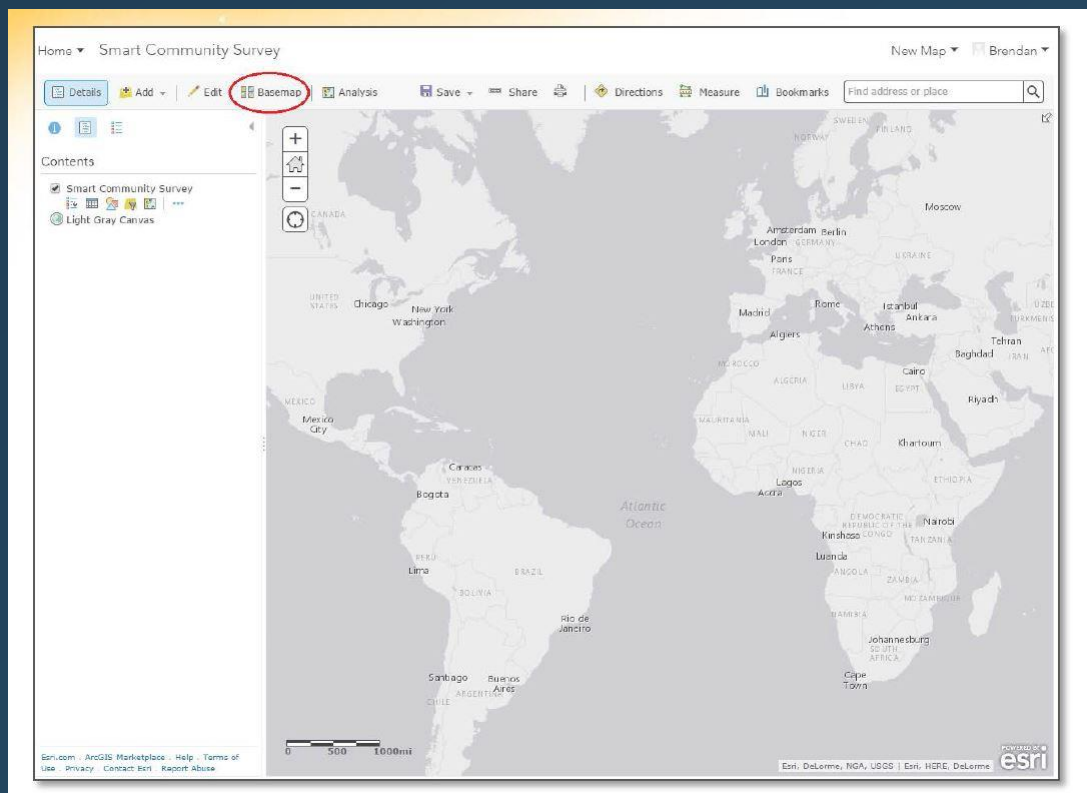
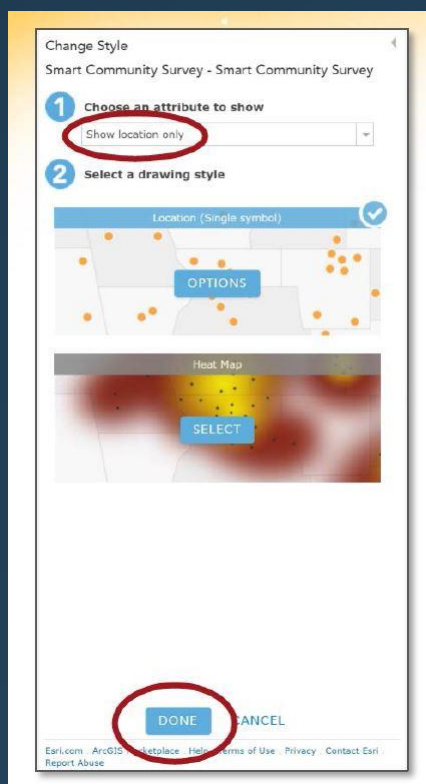
Buttons:
Open in Map Viewer
Open in Scene Viewer
Open in ArcGIS for Desktop
Publish
Export Data
Share



Build a GeoForm: Step 2

Create a web map

Change the map style, base map, and focus area

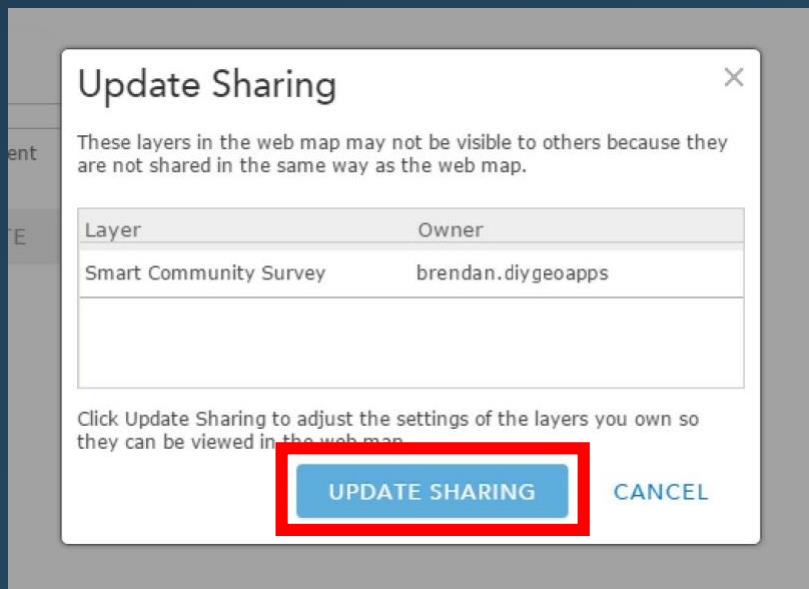




Build a GeoForm: Step 2

Create a web map

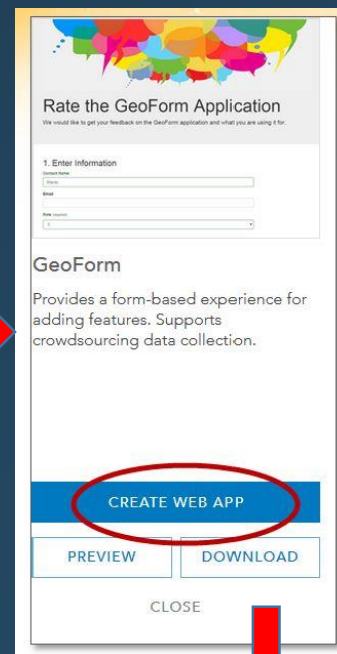
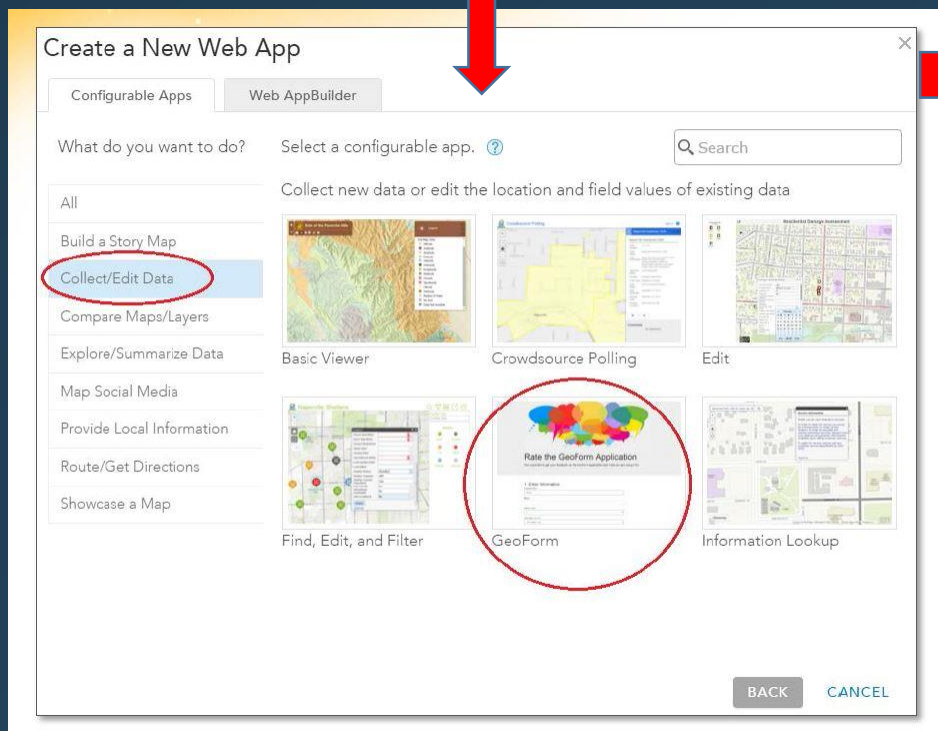
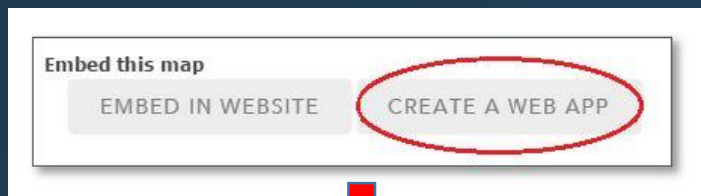
SAVE and SHARE your map





Build a GeoForm: Step 3

Customize your GeoForm







Build a GeoForm: Step 3

Follow the GeoForm Builder

- Select to use the WebMap you just made
- Select to use your new layer as your Editable Layer
- Select the Fields from your layer to use.
Configured these (enter your form questions).

Select Form Fields

Here you can select which fields will be visible to your GeoForm audience, edit the Labels they will see, and add a short Description to help with data entry.

Order	Enabled	Field	Label ⓘ	Configure
1	<input checked="" type="checkbox"/>	Score	Score	
2	<input checked="" type="checkbox"/>	Comments	Comments	

← Previous Preview **Next →**

Configure Field 'Score'

Help Text (optional) ⓘ

Rate how smart you think your community is on a scale of 1 to 5. 5 = You regularly use

Provide a short description or instructions for this field.

Hint (optional) ⓘ

Placeholder text for the field.

Display As

Text

Close



Build a GeoForm: Step 3

Follow the GeoForm Builder

Select a Theme, Configure the Viewer, Choose Options

Select Form Theme

Style your GeoForm using the themes below based on your preference.

Cyborg



← Previous Preview Next →

Options

☐ Enable offline support

Store submissions when there is no network connection and submit them when a connection is restored.

☒ Show Layer

You can configure the GeoForm to Show/Hide Layer. This option only applies to a single layer setup.

☒ Social media sharing buttons

Social media buttons allow your audience to easily share your GeoForm once they have made a submission

☒ Default Map Extent

The map will reset to the default extent in your web map after submission - this can be disabled at any time.

☐ Locate On Load

You can configure the GeoForm to use the current location on page load

☐ Show Basemap Toggle

You can configure the GeoForm to Show/Hide the Basemap Toggle

Push pin

Blue

Choose from a variety of colors for the map pushpin, it should be different from the map symbology to help the user put their submission on the map

Select Location By

☒ My Location

☒ Search

☐ Latitude & Longitude Coordinates

☐ USNG Coordinates

☐ MGRS Coordinates

☐ UTM Coordinates

Allow users to select a location using these methods.

← Previous Preview Next →



Build a GeoForm: Step 3

Follow the GeoForm Builder

Preview, Save & Exit

1. Start
2. Webmap
3. Layer
4. Details
5. Fields
6. Style
7. Viewer
8. Options
9. Preview
10. Publish

Preview Application

How Smart Is Your Community?

Fill out the simple survey below about your community. The results of the survey will be used to create a web application that will show citizen perceptions of how smart communities are around the world.

1. Enter Information

Score (required)

Rate how smart you think your community is on a scale of 1 to 5. 5 = You regularly use spatial technology to learn about your community or communicate with your local government. 1 = You never use spatial technology to learn about your community or communicate with your local government.

← Previous Next →


Save Application

If you are finished customizing your GeoForm, save the application and begin sharing with your audience. You can always return to this builder and continue customizing it based on feedback.

← Previous **Save and Exit** Save



GeoForm Demo: Kharkiv Public Safety Survey



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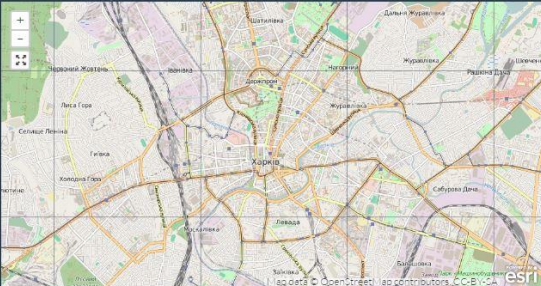
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Find address or place

Locate Me



3. Complete Form

Add this information to the map.